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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,424	09/28/2001	Kari M. Maki	FORSAL-25	6386

36528 7590 02/24/2006

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EXAMINER

NGUYEN, TAN D

ART UNIT PAPER NUMBER

3629

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Response to Amendment

1. The amendment filed 12/05/2005 has been entered. Claims 20, 2-11, 19, and 21 (3 method claims) are active and are rejected as followed.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 19 (method¹), 20, 2-11 (method²), and 21 (method³) are rejected under 35 U.S.C. 103(a) as being unpatentable over (1) Applicant Admitted prior Art (AAPA) in view of (2) EP 0 822 473 and (3) MOTOYAMA (US Patent 5,909,493) or further in view of (4) EP 0 825 506.

As for Independent method¹ claim 19, AAPA, as disclosed in the "Background of the invention", [[0004] "Conventionally, the servicing of paper ..."]-[0008], discloses a conventional method for servicing a production plant, selected from the group consisting of (a) a paper mill/machines or (b) board making /machines and the like, comprising the steps of:

(a) gathering information related to manufacturing processes and machinery of the production plant in printed or electrical form by the production plant;

(b) submit these information to the service unit (personnel) in a remote terminal connection for analysis;

(c) communicate simultaneously by telephone to the production personnel to provide an efficient and fast solution to problematic situation.

Note that AAPA discloses a production plant comprising well known paper mill/machines or (b) board making /machines and the like which inherently includes well known related / associated plants such as pulp production plant to provide the pulp to the paper mill or finishing plant to convert the paper to finish paper product.

Alternatively, the inclusion of other related / associated plants such as pulp production plant and a paper finishing plant would have been obvious as mere applying the same servicing method to other equipment of different functions. Also, the difference in the type of pulp/paper mill/plant is non-essential and would have been obvious to a skilled artisan, i.e. a process control engineer. Moreover, this limitation only appears in the preamble and not shown in the body of the claim and therefore, it receives very little patentable weight. If this limitation is critical, it should also appear in the body of the claim. Therefore, AAPA fairly teaches the claimed invention except for carrying out (a) using at least one information system, using the information systems to supervise and control and shown in steps (b), (c) to (h).

EP 0 822 473 fairly discloses a method for servicing a production plant (industrial and manufacturing apparatus {see col. 1, lines 6-7, 38-39} comprising the steps of:

a) gathering information related to the manufacturing processes and machinery equipments (Fig. 1, 106) of a production (or manufacturing) plant (102, 103, 104) by means of at least one information system and/or measurement unit and/or production control unit (equipments 106);

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b) connecting a service system server (host computer 107 which inherently contains a file server) to a local information network (106, 109) of the production plant;

c) collecting informations from different systems (#106) of the production plant to the service system server (107);

d) sending the collected information from the production plant to a remote service unit (vendor unit) (108) wherein the information submitted from the production plant is collected and analyzed (Figs. 3-5),

f) isolating the information network of the service unit from the Internet by a firewall;

h) and transferring the information bi-directionally via the firewall between the production plant and the information network of the service unit in a secured format;

wherein data signal is transferred between the production plant and the service unit plant (Fig. 1, Fig. 2, col. 3, lines 4-58, col. 4, lines 3-48, col. 7, lines 22-26). Note that EP 0 822 473 cites an example of the industrial equipment ***such as*** semiconductor device manufacturing apparatus {see col. 1, lines 7 “such as”}, but as indicated in col. 10, lines 22-25, “conclusion”, EP 0 822 473 indicates the present invention is not limited to the above embodiments (such as semiconductor manufacturing apparatus) and various changes and modifications can be made within the scope of the present inventions, such as selection of other well known product manufacturing types or other product manufacturer facilities. It would have been obvious to modify the process of AAPA by using the remote maintenance system using the Internet as taught by EP 0

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822 473 for the well known Internet benefits indicated col. 7, lines 40-57, such as low cost, high speed, centralized, and higher efficiency.

As for the new limitation of "using the information systems to supervise and controls", this is fairly taught in EP 0 822 473 col. 5, lines 28-32, col. 8, lines 30-45.

Therefore, the teaching of AAPA /EP 0 822 473 teaches the claimed invention except for (g) isolating the internal information network of the production plant from the Internet by a firewall.

MOTOYAMA is cited to teach well known step or means for additional security measure used in connecting a computer network to the Internet a protective device known as firewall to allow only authorized computers/users to access a network or other computer via the Internet (see fire wall 14, fire wall 50, fire wall 40) (see Fig. 1, col. 4, lines 15-25). It would have been obvious to modify the process of AAPA / EP 0 822 473 by providing a firewall to isolate the internal information network of the production plant from the Internet to provide additional security measure as taught by MOTOYAMA above.

4. **As for Independent method² claim 20** which has the same steps (a)-(g) as in independent claim 19, it's rejected for the same reasons set forth in claim 19 above and furthermore, the teachings of steps "(h) scheduling maintenance periods ... and (i) anticipating future needs of servicing based on the continuous data collection" are fairly taught in EP 0 822 473 in col. 10, lines 5-15 "troubles can be prevented in advance", Figs. 2, 3, and 6 "501 Trouble databases", col. 7, lines 10-15 "information as part of the trouble database can be disclosed to users (factories) and each user can access

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various kinds of past maintenance information through the Internet and employs an appropriate countermeasure against his own troubles” which normally involves scheduling proper downtime for maintenance or installing spare or new parts to avoid malfunctions. Note that the various maintenance scenarios and planning of operations are within the skilled of the artisan in view of the general teachings and would have been obvious to a skilled artisan to modify the plans to suit each manufacturing facility.

As for dep. claim 2 (part of 20), MOTOYAMA discloses the network (16) within the confines of firewall 14 prior to connecting to the Internet (10), therefore the disclosure of a similar setup of a firewall connected between the Internet and the system service server would have been obvious to avoid unauthorized access to the server from the Internet network.

As for dep. claim 3 (part of 20), the treating and processing of data are fairly taught in EP 0 822 473 Fig. 3, col. 5, lines 5-30.

As for dep. claim 4 (part of 20), the general limitation of securing the network using well known means such as password, ID addresses, or ID codes is fairly taught by EP 0 822 473 on col. 7, lines 23-35 or would have been obvious to an artisan.

As for dep. claim 5 (part of 20), this is inherently in the process of EP 0 822 473 wherein the host computer (108) is in the vendor’s area which is normally remote from the manufacturing plant (see abstract, col. 6, lines 15-30, Fig. 4).

As for dep. claim 6 (part of 20), Fig. 1 discloses several factories, 102, 103, 104, see EP 0 822 473 col. 8, lines 20-45.

As for dep. claim 7 (part of 20), this is inherently included in the system of EP 0 822 473/MOTOYAMA when the information is sent between the systems in a standard format.

As for dep. claim 8 (part of 20), the analysis step is taught in EP 0 822 473 Fig. 2, 3, 5.

As for dep. claims 9-10 (part of 20), the recommendation step is taught on Figs. 3-5 of EP 0 822 473.

As for dep. claim 11 (part of 20), the transfer of data signals are inherently included and taught in EP 0 822 473 col. 3 lines 5-55 or digital data processors 12, 14 of Fig. 1.

5. **As for Independent method³ claim 21** which has the same steps (a)-(g) as in independent claim 19, it's rejected for the same reasons set forth in claim 19 above and furthermore, the teachings of steps "(h) scheduling maintenance periods ... and (i) anticipating future needs of servicing based on the continuous data collection" are fairly taught in EP 0 822 473 in col. 10, lines 5-15 "troubles can be prevented in advance", Figs. 2, 3, and 6 "501 Trouble databases", col. 7, lines 10-15 "information as part of the trouble database can be disclosed to users (factories) and each user can access various kinds of past maintenance information through the Internet and employs an appropriate countermeasure against his own troubles" which normally involves scheduling proper downtime for maintenance or installing spare or new parts to avoid malfunctions. Note that the various maintenance scenarios and planning of operations

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are within the skilled of the artisan in view of the general teachings and would have been obvious to a skilled artisan to modify the plans to suit each manufacturing facility.

6. Claims 19 (method¹), 20, 2-11 (method²), and 21 (method³) are rejected (2nd time) under 35 U.S.C. 103(a) as being unpatentable over (1) EP 0 822 473 in view of (2) LAVIGNE and (3) MOTOYAMA (US Patent 5,909,493) or further in view of (4) EP 0 825 506.

As for Independent method¹ claim 19, in a remote method and apparatus for maintenance process, EP 0 822 473 fairly discloses a method for servicing a production plant (industrial and manufacturing apparatus, such as manufacturer of semiconductor device) comprising the steps of:

a) gathering information related to the manufacturing processes and machinery equipments (106) of a production (or manufacturing) plant (102, 103, 104) by means of at least one information system and/or measurement unit and/or production control unit (equipments 106);

b) connecting a service system server (host computer 107 which inherently contains a file server) to a local information network (106, 109) of the production plant;

c) collecting informations from different systems (#106) of the production plant to the service system server (107);

d) sending the collected information from the production plant to a remote service unit (vendor unit) (108) wherein the information submitted from the production plant is collected and analyzed (Figs. 3-5),

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f) isolating the information network of the service unit from the Internet by a firewall;

g) and transferring the information bi-directionally via the firewall between the production plant and the information network of the service unit in a secured format;

wherein data signal is transferred between the production plant and the service unit plant (Fig. 1, Fig. 2, col. 3, lines 4-58, col. 4, lines 3-48, col. 7, lines 22-26).

As for the limitation of "from the group consisting of a paper mill,paper finishing plant ", it would have been obvious to apply the same teaching to other similar manufacturing facility, i.e, manufacturing pulp, paper or oil, etc., to obtain similar results, absent evidence of unexpected results. Note that on col. 10, lines 22-25, EP 0 822 473 discloses that "various changes and modifications can be made within the scope of the invention" and the selection of other type of manufacturing facility is considered as immaterial change or modification to a person of ordinary skill at the time of the invention. Alternatively, the use of file server instead of peer-to-peer server or computer handle other information form other sources would have been obvious as using a highly special computer with larger storage to serve other computers using the network.

Therefore, EP 0 822 473 discloses the claimed invention except for (1) a production plant selected from the group consisting of a paper mill, board mill, pulp production plant, and a paper finishing plant in the preamble and step (a) above and (2) isolating the internal information network of the production plant from the Internet by a firewall.

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LAVIGNE is merely cited to teach well known and basis instrumentation applications for the pulp and paper industry (1979) wherein computer network are set up in a typical production plant, i.e. pulp mill or paper mill/board mill, and paper finishing plant comprising gathering information related to manufacturing processes and machinery of the production plant by at least one information system, measurement unit and production control unit wherein information is collected, analyzed and a controller is used to supervise and control the process {see Figs. 14-7, 14-8, 15-1, 15-2, 15-13, 15-14, 15-15, 16-1 (paper mill, paper machine, and finishing plant) and 16-4 (computer system, server)}. It would have been obvious to modify the teaching of EP 0 822 473 by selecting other type of industrial or manufacturing plant, such as pulp and paper mill, as merely applying similar process to other similar manufacturing product to achieve similar result, absent evidence of unexpected results. Note that this follows within the immaterial "various changes and modifications can be made within the scope of the present invention" of EP 0 822 473 on col. 10, lines 22-25. Note that LAVIGNE teaches the "process control computer applications in the paper industry" which normally covers 3 general areas such as pulp mill, paper mill, and operations involves utilities and by-products such as paper finishing plant or power plant.

MOTOYAMA is cited to teach well known step or means for additional security measure used in connecting a computer network to the Internet a protective device known as firewall to allow only authorized computers/users to access a network or other computer via the Internet (see fire wall 14, fire wall 50, fire wall 40) (see Fig. 1, col. 4, lines 15-25). It would have been obvious to modify the process of EP 0 822 473 by

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providing a firewall to isolate the internal information network of the production plant from the Internet to provide additional security measure as taught by MOTOYAMA above.

In a similar method and apparatus for remote process control, EP 0 825 506 discloses the use of a central information service system server (20) for collecting information from local information systems (measurement units, sensing devices, etc) (19a-19e) and responsible for establishing communications over the Internet network with remote service unit (col. 3, lines 40-50, col. 4, lines 15-55). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the process of EP 0 822 473 / LAVIGNE / MOTOYAMA to include a central information service system server for collecting local information network of the production plant as taught by EP 0 825 506 for establishing communications over the network.

7. **As for Independent method² claim 20** which has the same steps (a)-(g) as in independent claim 19, it's rejected for the same reasons set forth in claim 19 above and furthermore, the teachings of steps "(h) scheduling maintenance periods ... and (i) anticipating future needs of servicing based on the continuous data collection" are fairly taught in EP 0 822 473 in col. 10, lines 5-15 "troubles can be prevented in advance", Figs. 2, 3, and 6 "501 "Trouble databases", col. 7, lines 10-15 "information as part of the trouble database can be disclosed to users (factories) and each user can access various kinds of past maintenance information through the Internet and employs an appropriate countermeasure against his own troubles" which normally involves

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scheduling proper downtime for maintenance or installing spare or new parts to avoid malfunctions. Note that the various maintenance scenarios and planning of operations are within the skilled of the artisan in view of the general teachings and would have been obvious to a skilled artisan to modify the plans to suit each manufacturing facility.

As for dep. claim 2 (part of 20), MOTOYAMA discloses the network (16) within the confines of firewall 14 prior to connecting to the Internet (10), therefore the disclosure of a similar setup of a firewall connected between the Internet and the system service server would have been obvious to avoid unauthorized access to the server from the Internet network.

As for dep. claim 3 (part of 20), the treating and processing of data are fairly taught in EP 0 822 473 Fig. 3, col. 5, lines 5-30.

As for dep. claim 4 (part of 20), the general limitation of securing the network using well known means such as password, ID addresses, or ID codes is fairly taught by EP 0 822 473 on col. 7, lines 23-35 or would have been obvious to an artisan.

As for dep. claim 5 (part of 20), this is inherently in the process of EP 0 822 473 wherein the host computer (108) is in the vendor's area which is normally remote from the manufacturing plant (see abstract, col. 6, lines 15-30, Fig. 4).

As for dep. claim 6 (part of 20), Fig. 1 discloses several factories, 102, 103, 104, see LAVIGNE Figs. 15-1, 15-14, 16-1.

As for dep. claim 7 (part of 20), this is inherently included in the system of EP 0 822 473/MOTOYAMA when the information is sent between the systems in a standard format.

As for dep. claim 8 (part of 20), the analysis step is taught in EP 0 822 473 Fig. 2, 3, 5.

As for dep. claims 9-10 (part of 20), the recommendation step is taught on Figs. 3-5 of EP 0 822 473.

As for dep. claim 11 (part of 20), the transfer of data signals are inherently included and taught in EP 0 822 473 col. 3 lines 5-55 or digital data processors 12, 14 of Fig. 1.

8. **As for Independent method³ claim 21** which has the same steps (a)-(g) as in independent claim 19, it's rejected for the same reasons set forth in claim 19 above and furthermore, the teachings of steps "(h) scheduling maintenance periods ... and (i) anticipating future needs of servicing based on the continuous data collection" are fairly taught in EP 0 822 473 in col. 10, lines 5-15 "troubles can be prevented in advance", Figs. 2, 3, and 6 "501 Trouble databases", col. 7, lines 10-15 "information as part of the trouble database can be disclosed to users (factories) and each user can access various kinds of past maintenance information through the Internet and employs an appropriate countermeasure against his own troubles" which normally involves scheduling proper downtime for maintenance or installing spare or new parts to avoid malfunctions. Note that the various maintenance scenarios and planning of operations are within the skilled of the artisan in view of the general teachings and would have been obvious to a skilled artisan to modify the plans to suit each manufacturing facility.

Response to Arguments

9. Applicant's arguments filed 12/5/05 with respect to the 103 rejections are not persuasive because:

(1) Applicant's comment that EP 0 822 473 deals with a generic factory and fails to teach a paper mill, a board mill, a pulp production plant, and a paper finishing plant is not persuasive because as cited above, EP 0 822 473 is cited to teach a method for servicing a production plant (industrial and manufacturing apparatus {see col. 1, lines 6-7, 38-39} comprising the steps of:

a) gathering information related to the manufacturing processes and machinery equipments (Fig. 1, 106) of a production (or manufacturing) plant (102, 103, 104) by means of at least one information system and/or measurement unit and/or production control unit (equipments 106);

b) connecting a service system server (host computer 107 which inherently contains a file server) to a local information network (106, 109) of the production plant;

c) collecting informations from different systems (#106) of the production plant to the service system server (107);

d) sending the collected information from the production plant to a remote service unit (vendor unit) (108) wherein the information submitted from the production plant is collected and analyzed (Figs. 3-5),

f) isolating the information network of the service unit from the Internet by a firewall;

h) and transferring the information bi-directionally via the firewall between the production plant and the information network of the service unit in a secured format;

wherein data signal is transferred between the production plant and the service unit plant (Fig. 1, Fig. 2, col. 3, lines 4-58, col. 4, lines 3-48, col. 7, lines 22-26). Note that EP 0 822 473 cites an example of the industrial equipment **such as** semiconductor device manufacturing apparatus {see col. 1, lines 7 "such as"}, but as indicated in col. 10, lines 22-25, "conclusion", EP 0 822 473 indicates the present invention is not limited to the above embodiments (such as semiconductor manufacturing apparatus) and various changes and modifications can be made within the scope of the present inventions, such as selection of other well known product manufacturing types or other product manufacturer facilities.

The teachings of a paper mill, a board mill, a pulp production plant, and a paper finishing plant is by AAPA, as disclosed in the "Background of the invention", [[0004] "Conventionally, the servicing of paper ..."]-[0008], discloses a conventional method for servicing a production plant, selected from the group consisting of (a) a paper mill/machines or (b) board making /machines and the like, comprising the steps of:

(a) gathering information related to manufacturing processes and machinery of the production plant in printed or electrical form by the production plant;

(b) submit these information to the service unit (personnel) in a remote terminal connection for analysis;

(c) communicate simultaneously by telephone to the production personnel to provide an efficient and fast solution to problematic situation.

Note that AAPA discloses a production plant comprising well known paper mill/machines or (b) board making /machines and the like which inherently includes well known related / associated plants such as pulp production plant to provide the pulp to the paper mill or finishing plant to convert the paper to finish paper product.

Alternatively, the inclusion of other related / associated plants such as pulp production plant and a paper finishing plant would have been obvious as mere applying the same servicing method to other equipment of different functions. Also, the difference in the type of pulp/paper mill/plant is non-essential and would have been obvious to a skilled artisan, i.e. a process control engineer. Moreover, this limitation only appears in the preamble and not shown in the body of the claim and therefore, it receives very little patentable weight. If this limitation is critical, it should also appear in the body of the claim. Therefore, AAPA fairly teaches the claimed invention except for carrying out (a) using at least one information system, using the information systems to supervise and control and shown in steps (b), (c) to (h).

3. The elements included are typical in any manufacturing facility for effective monitoring of the whole plant if desired, mere selection of other manufacturing product, from semiconductor to pulp or paper or oil or any other manufacturing facilities would have been obvious to a skilled artisan as mere applying the same process to other similar product to obtain similar results, absent evidence of unexpected results. Note that on col. 1, lines 6-12, EP 0 822 473 mentions "industrial equipment requiring maintenance, such as a semiconductor device manufacturing apparatus" which indicates the type of industrial plant is not critical and the same process can be

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applicable to any manufacturing facility. Note that on col. 10, lines 22-25, EP 0 822 473 discloses that "various changes and modifications can be made within the scope of the invention" and the selection of other type of manufacturing facility is considered as immaterial change or modification to a person of ordinary skill at the time of the invention. Therefore, applicant have not shown why it's not obvious to apply the teaching EP 0822473 to other industries.

4. All of the features of new independent claim 21 are fairly taught/cited in previous claim 20 and are therefore rejected for the same reasons set forth in claim 20 above.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

No claims are allowed.

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11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct@uspto.gov>. Should you have any questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

In receiving an Office Action, it becomes apparent that certain documents are missing, e. g. copies of references, Forms PTO 1449, PTO-892, etc., requests for copies should be directed to Tech Center 3600 Customer Service at (571) 272-3600, or e-mail CustomerService3600@uspto.gov.

Any inquiry concerning the merits of the examination of the application should be directed to Dean Tan Nguyen at telephone number (571) 272-6806. My work schedule is normally Monday through Friday from 6:30 am - 4:00 pm. I am scheduled to be off every other Friday.

Should I be unavailable during my normal working hours, my supervisor John Weiss may be reached at (571) 272-6812. The FAX phone numbers for formal communications concerning this application are (703) 872-9306. My personal Fax is (571) 273-6806. Informal communications may be made, following a telephone call to the examiner, by an informal FAX number to be given.

dtn
Feb. 20, 2006


DEAN T. NGUYEN
PRIMARY EXAMINER